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ABSTRACT

A study was conducted to determine factors that influence high school students to enroll or not to enroll in vocational courses at the secondary level. It sought to determine student attitudes toward vocational education and the effect selected variables have on student decisions. Data were collected from 19,134 students in 38 schools in Louisiana. Attitudes held by most students toward vocational education were favorable. The percentage of students with favorable attitudes increased as their experience with vocational education increased. Recent changes in high school graduation requirements did not appear to affect significantly the number of students who wish to take vocational courses. Over two-thirds of the students said they were being encouraged to go to college by parents; 80 percent indicated they were being encouraged to do so by teachers and counselors. Persons in the home exerted the most influence on career choice. Interest in the work, salary, working conditions, and personal satisfaction were the most important factors considered by students in selecting a career. Students were not receiving effective career guidance. Perceptions of vocational students did not differ significantly from nonvocational students in the area of career decision making. (Correspondence and data are appended.) (YLB)

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VARIABLES AFFECTING HIGH SCHOOL STUDENT ENROLLMENT IN SECONDARY VOCATIONAL COURSES

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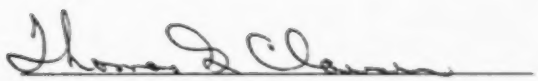
FOREWORD

This research report, Variables Affecting High School Student Enrollment in Secondary Vocational Courses, was produced as a result of a project funded by the Louisiana Department of Education to the School of Vocational Education and Technology, Louisiana State University, Baton Rouge, Louisiana. The data reported herein represent the opinions of over 19,000 high school students in 43 schools and the data collection efforts of their teachers, counselors, and principals from across the State of Louisiana.

The project was conducted to determine the attitudes held by Louisiana's high school students toward vocational education and to determine the career decision-making patterns of Louisiana high school students. It is hoped that the results of this project will aid school personnel in their efforts to improve the decision-making practices of high school students as they relate to career planning and vocational education.



Thomas G. Clausen, Ph.D.
State Superintendent of Education

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Finally, our sincere thanks go to the students, principals, teachers, and counselors who cooperated with us as we gathered the data. It is our hope that their efforts will result in improved career decision making by future students in Louisiana's high schools.

Elaine Webb, Ed.D.
Assistant Superintendent
VOCATIONAL EDUCATION

INTRODUCTION

Recent changes in graduation requirements, coupled with the national hysteria resulting from publications such as "A Nation at Risk," have resulted in seemingly diminishing vocational opportunities for secondary students. Newspapers, school board members, school administrators, and others are making numerous public statements and taking various actions to increase the academic preparation of high school graduates. Currently, about 25% of Louisiana's high school students go to college and the remaining 75% enter other postsecondary education programs, enter the world of work, or depend on various other avenues in life.

With a focus primarily on "academics," other important aspects of preparation for the future of these students are being negated or overlooked. These actions appear to be hurting the image of vocational education and other elective programs in the minds of students, parents, and the general public, and are also decreasing opportunities for students to pursue vocational preparation. It appears that a lack of factual information concerning vocational programs and an apparent disregard for student career aspirations and development of career decision making skills has contributed to this problem.

Factual information is needed by those who work closely with vocational education programs so that these difficulties may be alleviated. Furthermore, counselors need factual, up-to-date information on how Louisiana students are manifesting their career decision-making skills.

Educational Significance

This project enabled Louisiana's secondary vocational teachers to have access to information which can improve the image of vocational education programs among students, parents, counselors, and the general public. A pamphlet giving the results of the study and designed for use by teachers has been distributed to all secondary vocational teachers in the state through the parish vocational supervisors.

By knowing what factors affect students' decisions to enroll or not to enroll in vocational courses, vocational teachers will be able to design student recruitment strategies for use at the local level. In addition, knowledge of the effect that the new high school graduation requirements is having on student decisions regarding enrollment in vocational courses will enable vocational teachers and other educators to provide informed opinions to parents, students, parish school board members and administrators, and the Louisiana Board of Elementary and Secondary Education.

Purpose

The purpose of this study was to determine the factors that influence high school students to enroll or not to enroll in vocational courses at the secondary level.

Objectives

1. Determine the perceptions held toward vocational education by vocational and nonvocational students.

2. Determine what effect selected variables have on high school vocational student decisions to enroll or not to enroll in high school vocational courses. Variables studied included:

a. Students' perceptions of their parents' attitudes toward secondary vocational education and their parents wishes as to whether they should take vocational education courses

b. Increased graduation requirements (and the resulting emphasis on college preparation) enacted by the Louisiana Board of Elementary and Secondary Education

c. Student and parental demographic and academic characteristics

d. Student awareness of employment opportunities available upon completion of vocational education courses

e. Student awareness of the existence of high school vocational education offerings

f. Student career plans

g. Students' perception of counselor attitudes toward vocational education, amount of information about vocational courses and career opportunities available from the counselor, and level of assistance provided by the counselor

Limitations

This study had the following limitations:

1. There was no control over the amount of help the students may have received from their teacher or room monitor when filling out the instrument. In these cases, if help was provided, teacher attitudes or biases may have affected student responses.

2. The number of schools used in the study were minimized so that resources available could be utilized to the best advantage. A sampling error rate of less than one percent by cell was judged to be acceptable for this study.

Definition of Terms

Susan Sears (1982), along with a panel of career guidance experts sponsored by the National Vocational Guidance Association, compiled a Glossary of Career Guidance Terms. The following terms are used in this study and the definitions were taken from this glossary:

1. Career Development - The total constellation of psychological, sociological, educational, physical, economic, and chance factors that combine to shape the career of any given individual over their life span.

2. Career Development Theories - Theoretical bases for understanding how individuals develop vocationally. These bases provide guidance specialists with the guidelines necessary for helping them solve problems, avoid blocks, and progress with efficiency and satisfaction.

3. Decision Making - A process that is designed to assist persons in making personally satisfying decisions and that includes these components: (1) exploration and clarification of personal values, (2) use of the data about self and the environment, and (3) study of the decision process and strategies. The process includes these steps: (1) recognizing the need for a decision, (2) exploring alternative choices, (3) predicting the probable outcomes of each choice, (4) assigning personal values to each choice, (5) determining the cost of each choice,

(6) making a decision, (7) implementing the decision, and (8) evaluating the outcomes of the decision.

The following terms were defined by the project staff for this study:

4. Split-schools - This describes schools that housed ninth grade students in a different location from the tenth and twelfth grade students. These ninth graders were either in a school facility that served only ninth graders or they were combined with seventh and eighth graders in a junior high school.

5. Influence - This means to affect or alter the character, conduct, or thought, to have an effect on the condition or the development of an individual in regard to career decisions.

REVIEW OF LITERATURE

The focus of this literature review is on career decision making and the forces which have an impact upon those decisions. The review yielded many related studies but the primary audience in this review will be the secondary student and the factors related to career choice. Theories upon which many vocational counselors base career counseling will be explored.

A Theoretical Base

Leading to the rise of the vocational guidance movement were economic, social, ideological, and scientific conditions. In the early 1900's, Frank Parsons wrote about choosing a vocation and outlined the process of vocational guidance. His theory, an early version of trait and factor theory, was based on three tenets: A wise vocational choice requires (1) a clear understanding of self, (2) a knowledge of requirements and conditions in various careers, and (3) the application of reasoning to determine the relationships between these two groups of information. The true reasoning of this relationship yields career decision making (Parsons, 1909).

This well-articulated theory of occupational choice is one of the most durable ones. Trait and factor theory was derived from the psychology of individual differences and has been developed further by theorists such as E. G. Williamson and A. J. Jones (Isaacson, 1986).

Occupational Choice

Because of personality differences an individual develops needs which (s)he seeks to satisfy through an occupational choice. This approach stresses individual motivation to meet these needs. Furthermore, different occupations are composed of persons of similar personality types and similar needs.

The central focus of these theories is choosing an occupation, the factors influencing the choice, and the adequacy of the choice as measured by satisfaction of need, success, or personal adjustment. These need-drive theories focus on the occupational choice as a means for satisfying needs, and the individual's behavior is viewed as goal oriented. Roe and Hoppock are among the leading proponents of the need-drive theory.

Anne Roe's theory has evolved from three basically different lines of research: (1) classifications of occupations, (2) developmental backgrounds and personalities of various types of research scientists, and, (3) psychological differences among workers in the various groups and levels of the classification system. These focus on the different climates of the early parent-child relations and the development of the individual's need hierarchy (Isaacson, 1986).

Hoppock's theory is that occupations are chosen to meet needs. The one chosen is the one that the individual believes will best meet the needs which are of most concern, and needs may be intellectually perceived or only vaguely felt to attract one in a certain direction. Thus, choice is influenced (Isaacson, 1986).

Vocational Development

Vocational development is one aspect of the many-faceted development of the individual. In this, the individual does not choose an occupation, but rather makes a series of occupational and related choices at different life stages which, when taken cumulatively, result in vocational development rather than in an occupational choice per se. Among the developmental theorists are found Ginzberg, Tiedeman, Holland, and Super (Isaacson, 1986).

Ginzberg's theory results from cross-sectional studies concerning vocational choice. The entire process is believed to occur in a series of definite stages. Reality testing experiences, the identification with suitable role models, and whether the individual is work- or pleasure-oriented are factors which influence the developmental process.

Tiedeman maintains career development includes the development of an orientation toward work that evolves within the psychosocial process of forming an ego-identity. Differentiation and integration are important aspects of the identity formation.

Holland believes that personality type is the major influence in an individual's career choice and development. He maintains that a person's growth and development are influenced by hereditary and environmental factors. He contends that people search for environments (occupations) that allow them to exercise their abilities and skills, express their attitudes and values, and take on agreeable problems and roles. He identified six types of persons, their preferred activities, and their aversions which are analogous to six work environments. He advocates use of interest or personality inventories to classify

individuals. The key role of the school counselor in this theory is apparent.

Super's theory is the broadest and most widely accepted theory of vocational development. He maintains people differ in abilities, interests, and personalities and are qualified through these characteristics for a number of occupations. He believes that vocational preferences change with time and experiences. It is a process from a series of life stages and substages. This approach stresses the interaction of personal and environmental variables in career development.

Theorists and researchers are in general agreement with the concept that work is important. The choices made for short-term and/or long-term careers are important and need to be addressed. Counselors, educators, and families need to be aware of different factors in life which may influence the career choice of individuals so that basic guidance can be provided for optimal results and satisfaction.

Influencing Factors

Career decisions made by individuals have been determined to be related to many factors. The demographics of ethnic, racial, personal characteristics, family affiliation, education, and aspiration are among factors found in studies which related to career decision making.

Significant Others

"The concept of 'significant others' has evolved from research, primarily in the field of sociology, which has explored the effects of influential persons such as parents, peers, and teachers on the lives of those with whom they come in contact" (Falk, 1980, p.3).

Mondart et al. conducted a benchmark study in 1970 that addressed the educational and occupational aspirations and expectations of Louisiana's high school youth. The authors found that parents, relatives and friends were the top ranked individuals who influenced both the educational and occupational choices of students. Guidance counselors ranked ninth out of 19 individuals in their influence on educational and occupational choices and ranked first among school personnel.

Falk found family, peers, teachers, guidance counselors, and others had a vast impact on student career decisions. "The type of person one becomes is theorized to be directly related to and influenced by those with whom one interacts" (Falk, 1980, p.3).

Not only is encouragement from parents helpful, but parental perspectives of themselves can be important in shaping the child's occupational decisions (Mills, 1981).

Schwartz (1982) said peers, teachers, and counselors have an effect on the career decisions of students. Wernick (1976) said career education has to involve teachers. Studies (Penn and Gabriel, 1976; Mills, 1981) indicate teachers are second only to parents in their influence on career decisions.

Daniels (1983) found that career decision making by students was preeminently influenced by parents, a fact largely unrecognized by career guidance personnel and school administrators. Researcher Daniels found this was evidenced by a lack of programs designed to assist parents and students in the decision making process.

Singer and Sechler (1984) stated that parents have an influence on their children's career choices.

Kendall (1983) studied the traditional and the nontraditional completers of secondary vocational programs in West Virginia. Findings indicated parents supported the vocational choices but nontraditional completers received less support and more opposition. Students felt parents and vocational teachers were of most help with career choice.

Poole (1983) studied "the career decision making process of Australian youth and the influence of home and school in making the decision. Results indicated that at age 14, the major influence was parents, and career resources were rarely used."

Conclusions from a study by Veres and Carmichael (1981) were that parents, siblings, and peers were important influences on student attitudes toward nontraditional careers.

Mangieri and Kemper (1984) found implications in their study of some 4,349 students that prestige and recognition, working conditions, friends or relatives who were teachers and cost of education are not important factors to those expressing high interest in teaching.

One of the findings by McTeer et al. (1982) was that friends can influence personal decisions and that career planning decisions are justifiable. Girls answered correctly significantly more items than boys in self-understanding and decision making.

Hansen and Ross (1980) did a longitudinal study of high school seniors to examine the effects of school personnel on educational and occupational decisions of farm-reared students. Information on "significant others" of five types were gathered. Higher status background encouraged college pursuits and lower status encouraged vocational technical courses. Self, parents and relatives or friends, guidance counselors, teachers, and administrators were considered as the

significant others. Family was found to have the most significant effect.

Educational Aspects

Mondart et al. (1970) found that Louisiana students developed occupational aspirations at an early age, at the tenth grade level or below, giving schools ample time to provide relevant training. As a rule students were not knowledgeable in the occupation to which they aspired; less than one third had made a study of it. Students were aware of the training needed in the occupation of their choice.

In addition, Mondart et al. stated that:

> Both the school and home encourage students to attain a high education level: about one-third of the students expect to attend college for four years; another one-third expect to enter some kind of a post high school program for vocational training; and the remaining one-third consider ending their formal education with the high school. (pp. 51-52).

In addressing the college-bound emphasis of the schools, Mondart et al. concluded that "The strong commitment of the school to college preparation tends to develop impractical educational aspirations by many students; a process that is taking place in the absence of instruction covering occupations below the professional level." (p. 59).

Baker (1984) focused on career opportunities and suggested that counselors outline both obvious and less obvious career choices, particularly as these applied to home economics.

McCracken et al. (1984) studied the relationship between the family farm situation and the occupational goals of the students, reasons for enrolling in vocational agriculture, and future aspirations. Both males and females were included in the study to determine if sex was an influencing factor in career decisions. The authors did not find any differences between male and female students in the proportion from

full-time farms, part-time farms, and those who were not from farms. They also found that no differences existed by in their occupational goals, reasons for their decisions to enroll, and their plans following graduation.

Gilchrist (1983) studied migrant youth in Connecticut. The results indicated that most of the youth studied had misconceptions about training and educational requirements for their career choice. Their work experiences were limited to jobs such as clerks or unskilled laborers.

Student responses showed that guidance counselors, the counseling process, and parental advice were influencing factors in the decision making process according to a study of effective program practices conducted by the New York State Education Department (1982).

Conley (1983) involved 813 seniors from 29 high schools in Delaware in a study of career planning, guidance, and school curricula. Vocational students had a more positive attitude toward their career planning than did students of the general college preparatory academic programs. A relationship existed between parent's educational level and the student's educational plans to pursue a career goal.

Thompson's (1983) findings suggest that vocational, technical and non-college-bound students should have different educational orientations and career interests, and students should be counseled accordingly.

Personal/Community

Mondart et al. (1970) concluded that students are motivated occupationally by the economic status they hope to achieve. They aspired to a family income equal to or above the national average.

McNulty (1983) found that reasons for occupational choices varied across grades. Factors studied included gender, grade, and locus of control.

Peterson (1982) studied the social placement of adolescents. Results indicate family decisions favored career goals of adolescent males over adolescent females.

Dekutoski (1984) studied the impact of different agricultural career awareness programs on minority and disadvantaged high school students. Results indicated that community size and type affected career choices.

Tittle (1981) found women tended to make career choices based on past experiences or expectations. High school students indicated personal values affected the decision of occupational choice, the decision to marry, and the decision to become a parent.

Nelms et al. (1982) investigated the impact of socioeconomic status on job choice and did not find any significance there.

Summary

Though theorists may not agree on how career decisions are made, general agreement is found in research that persons vital in the life of the student have significant influence on students and their career decisions.

METHODOLOGY

Population

This study encompassed all high school (grades 9-12) students at randomly selected schools in Louisiana. The Louisiana School Directory, 1985-1986 was used to identify the population of public schools in Louisiana. In 1985-1986 there were 413 high schools in the state of Louisiana, 14 of which served special populations such as gifted and talented students, special needs students, night classes, all male or all female groups or magnet school students. These 14 schools were eliminated from the population because of their specialized nature. As a result, the total school population consisted of 399 public schools with grades 9, 10, 11 and 12.

There were several school systems among the 399 that housed only ninth grade students, and others combined seventh, eighth and ninth together. In some school systems, there were two or more junior high or middle schools with ninth grade students that fed into one school with tenth, eleventh and twelfth grade students. When these situations were encountered, only one school was used in the study, the school with the largest number of ninth graders (from the seventh to ninth grade schools) that fed into the tenth to twelfth grade school. The ninth grade students were combined with the tenth to twelfth grade students to get a total school population, and then were treated as one school (split-school).

As a result of this procedure, the frame for the study consisted of 346 "schools," all of which had students in all four grades (ninth, tenth, eleventh and twelfth) or who had ninth grade students attending

school in a different location from the tenth, eleventh and twelfth grade students (split-school).

The schools were divided into three commonly accepted divisions in the state (North Louisiana, Acadiana or Southwest Louisiana, and Southeast Louisiana) (Figure 1) to recognize cultural differences in the state. The schools were further divided according to their athletic classifications (Louisiana High School Athletic Association, 1985).

The 1985 Louisiana High School Athletic Association (LHSAA) Official Handbook (Article 3, Section 2, Page 13) classification system lists five school sizes: (1) 4A - 1,075 or more students, (2) 3A - 526 to 1,074 students, (3) 2A - 275 to 525 students, (4) A-B - 117 to 272 students, and (5) C - 116 or fewer students.

Athletic class sizes 3A and 2A were not used in the split schools category because of the small number of schools this size in the state. These controls resulted in 15 sampling cells and were utilized to ensure a cross section sample of the student population.

The number of schools by region and size are presented in Table 1.

Sample

A cluster sample within a stratified random sample plan was used. This design was used so that identified subgroups (school size and area of state) within the population would be represented in the sample in the same proportion as existed in the population (Gay, 1981).

All students in the selected school participated in the study; therefore, the students in each school were defined as a cluster. Each individual high school was a possible sampling unit. This plan allowed

Figure 1

Geographic Regions of the State

Table 1.

Sampling Plan Used to Select Schools for the Study

Region of state	School size	Schools in population	Schools in sample	Students in sample
Combination schools (with students in grades 9, 10, 11 and 12)				
Acadiana	4A	11	2	3,187
	3A	21	2	1,110
	2A	23	2	601
	A-B	30	3	421
	C	14	2	165
North	4A	14	2	1,833
	3A	21	2	1,165
	2A	31	3	879
	A-B	45	3	479
	C	39	3	251
Southeast	4A	21	2	1,655
	3A	19	2	1,301
	2A	14	2	545
	A-B	13	2	448
	C	3	1	107
Split-schools (with students in grade 9 in one school and students in grades 10, 11 and 12 in a different school)				
Acadiana	4A	11	2	1,938
North	4A	3	1	1,144
Southeast	4A	13	2	1,905
Summary for project				
Totals		346	38	19,134

fairly accurate estimates of each stratum and much more accurate estimates of the overall population in the state.

The schools were selected for each cell by using a table of random numbers (Gay, 1981). Forty-three schools with a total estimated population of 24,200 students were selected. This number was based on the registered number of students at the beginning of the school year as recorded in the Louisiana School Directory (1985-86). Three alternate schools were selected in each cell. Sampling error rates by cell were calculated with the largest sampling error rate by cell being less than one percent. The sampling plan is presented in Table 1, and the schools that were selected based on this plan may be found in Table A1 in (Appendix A). The sample selected resulted in data being collected from 19,134 students.

Instrument Development

The instrument from a research project entitled "Educational and Occupational Aspirations and Expectations of High School Youth" (Mondart, Curtis, and Dobbins, 1970) was used as the starting point. A review of literature was conducted. Based on this review and contributions by the project staff, items were added to the instrument used in the 1970 study. All items on the revised instrument were evaluated to determine those that would yield the most valuable data for the objectives of the study. Final revisions were then made.

The instrument was assessed for content validity by four faculty members, ten graduate students, and seven student teachers at Louisiana State University. Additional revisions were made as a result of their responses and comments.

The instrument was field tested at three high schools in the state that varied in size and area of the state, with 1,105 students participating. As a result, only minor revisions were needed in the instrument, teacher instruction sheet and procedures used in data collection. Reliability estimates calculated from the field test data using Cronbach's Alpha resulted in r values of .94, .94, and .96.

The final instrument reliability estimates were calculated using Cronbach's Alpha. The estimates were r = .95, .97, and .98 for the three scales in the instrument. These values indicate that the instrument possessed internal consistency. The instrument may be found in Appendix B.

Data Collection

Robert Buck of the Louisiana Board of Elementary and Secondary Education (BESE) was contacted to ensure that the study would not violate BESE's rules limiting instructional interference. After conferring with other BESE staff members, he indicated that BESE would leave the decision to participate up to the parish school superintendents (personal communication, February 1986).

Parish school superintendents were contacted by mail (Appendix C) and telephone to request permission to survey those schools in the sample that were in their parish. Next, high school principals were contacted by mail (Appendix D) and telephone to request permission to survey their students and to set up a convenient date and time to do the survey. After oral permission was received to survey the students in each school selected, a letter of confirmation was mailed to each school's principal (Appendix E). A copy of this letter was also sent to

the parish superintendent. All correspondence may be found in Appendix C.

Individual homeroom sizes and teachers' or monitors' names were requested for each participating high school by telephone. Packets then were assembled with pencils, instruments, answer sheets, and instructions for each group monitor or homeroom teacher (Appendix F). The instrument was administered during the homeroom period or during a morning activity period. The instrument took approximately 20 to 25 minutes to complete in most homerooms.

Project staff traveled to each selected high school in the sample to administer the instrument according to the instructions found in Appendix G. A member of the project staff arrived at the school about 30 minutes before the predetermined appointment time to distribute or assist in the distribution of the packets and respond to questions from the monitor or homeroom teachers.

The monitors or homeroom teachers administered the instrument to their group or class. Each group followed instructions included in the packet. The project staff member stayed at the school while the students completed the instrument. When students were finished, the monitor or homeroom teacher returned the pencils, instruments, and answer sheets to the designated location, usually the school office. A follow-up letter of appreciation was written to each principal participating in the project (Appendix H).

Data were collected between April 9, 1986, and May 8, 1986, from 19,134 students. The principal of each school received a copy of the results for that school and a letter explaining how to interpret the computer printout in May (Appendix I). No student names were gathered.

Only those students who were present on the day of the survey were used in the study.

Data Analysis

Descriptive statistics were used to describe the data for objectives one and three. For objective two the chi-square test of independent distribution was used to determine if student responses about the persons influencing their career decisions were distributed independently of grade in school, sex, ethnic group, and number of children in the family.

The levels of vocational education experience used in several analyses were nonvocational students, low exposure vocational students (½ to 1 years in vocational education), and high exposure vocational students (1½ to 4 years of vocational education). Since the project involved over 19,000 students, tests of statistical significance were not practical since statistical tests conducted on a sample of this size would almost ensure statistical significance even though practical significance may not exist. The differences reported in the findings section were based on practical significance; i.e., if the percentage of students among the three groups of students varied by 5.0% or more, this was interpreted as a practically significant difference.

FINDINGS

This section presents the findings of the study. Data from 19,134 students were collected and analyzed. A total of 38 high schools were selected for the study. Data were gathered by researchers traveling to each school during the months of April and May, 1986 and surveying all students at that school.

Demographic Data

Data regarding the grade level, ethnic group, age, sex, curriculum pursued, high school grade point average, persons with whom the students were living, number of children in the students' families, father's education, and mother's education were collected. Some of these data were used for analyses reported in this section while the other data will be used for future analyses. These data are presented in Table A2 through A11 (Appendix J).

Attitudes Toward Vocational Education

Students were asked what their attitudes were toward vocational education and what they perceived their parents and guidance counselors attitudes were toward vocational education. The data are reported in Table 2. Over 80% of the students had a favorable attitude toward vocational education and thought their parents and counselor(s) had favorable attitudes toward vocational education.

The percentage of students who perceived their counselor had a positive attitude toward vocational education did not differ according to the amount of experience students had with vocational education. The

levels of vocational education experience used in this analysis were nonvocational students, low exposure vocational students (½ to 1 years in vocational education), and high exposure vocational students (1½ to 4 years of vocational education). The percentage who indicated that their attitude and the attitude of their parents was favorable was much lower (63.8% and 70.1%, respectively) for nonvocational students than for vocational students (Table 3).

Effect of Changes in Graduation Requirements

Because of the recent changes in high school graduation requirements, students were asked what they felt these changes would do to the number of vocational courses they would take in high school. Since the seniors could not change what courses they would take in high school, only the data from the freshmen, sophomore, and junior students were analyzed (Table 4). Almost one-third indicated that they were undecided, almost another one-third indicated there would be no change in the number of vocational courses they would take, 12.9% indicated the number would increase, and 14.6% indicated the number would decrease.

The percentage of freshmen, sophomores, and juniors who indicated that they would take more vocational courses was higher for those students who had taken vocational courses than for nonvocational students (Table 5). In addition, fewer low exposure students (students who had taken ½ to 1 year of vocational education) indicated that they would take the same number of vocational courses than did those in two groups.

The percentage who planned to take more courses declined from the ninth through the eleventh grades, and the number who planned to take

Table 2

Attitude of Parents, Students, and Guidance Counselors Toward Vocational Education (n = 19,134)

Attitude	Percent/frequency		
	Parents	Students	Counselors
Favorable	84.6 (16,179)	80.7 (15,435)	84.0 (16,069)
Unfavorable	14.2 (2,723)	18.4 (3,520)	8.6 (1,650)
Missing data	1.2 (232)	.9 (179)	7.4[a] (1,215)

[a]Includes 968 students (5.1%) who reported a counselor was not employed in their school.

Table 3

Differences in Percent Favorable Responses on Attitude Toward Vocational Education by Parents, Students, and Guidance Counselors According to Vocational Education Experience (n = 19,134)

Students' vocational education experience	Percent favorable responses		
	Parents	Students	Counselors[a]
Non-vocational students	70.1	63.8	85.3
Low exposure	86.8	82.2	91.8
High exposure	90.3	87.3	91.8

NOTE. Low exposure students had ½ to 1 year of vocational education. High exposure students had over 1 year of vocational education.

Table 4

How Freshmen, Sophomores and Juniors Perceived the New Graduation Requirements Will Change the Vocational Courses They Are Taking (n = 15,212)

Changes	Frequency	Percentage
Undecided	4,963	32.6
No change	4,370	28.7
Take fewer vocational courses	2,227	14.6
Take more vocational courses	1,962	12.9
Do not know about changes	1,566	10.3
Missing data	124	.8
Total	15,212	100.0

Table 5

Differences in the Plans of Freshmen, Sophomores, and Juniors Regarding Taking Vocational Courses According to Vocational Education Experience

(n = 15,212)

Plans regarding taking vocational courses	Students' vocational education experience		
	Non-vocational student	Low exposure	High exposure
Will take more courses	8.0	14.5	13.9
Will take the same number	33.3	24.4	32.0
Will take fewer courses	11.8	15.9	15.0
Undecided	34.2	35.2	29.5
Unaware of changes	12.7	10.0	9.6

the same number increased from the ninth through the twelfth grades (Table 6). The highest percentage reporting that they would take fewer vocational courses occurred in the tenth grade group.

Whether Students "Liked" School

Over three-fourths (75.6%) of the students indicated that they liked school (Table 7). There were no practically significant differences by the students' years of experience with vocational education.

What Students Had Been Encouraged to Do After High School

When the respondents were asked what parents, teachers, and guidance counselors had encouraged them to do after high school, over two-thirds indicated that they were being encouraged to go to college. Almost two-thirds (69.1%) indicated their parents, 82.6% indicated their teachers, and 78.8% indicated their counselors were encouraging them to go to college. Also, more students perceived that their teachers and counselors were encouraging them to go to college than those who perceived their parents were encouraging them to go to college.

The data in Table 8 also show that students were more likely to think they were encouraged by their parents than by teachers and guidance counselors to go to vo-tech or trade school, work full-time, or enter the military.

When the data were analyzed according to the students' experience in vocational education, it was found that practically significant differences existed in recommendations by parents to go to college. Over three fourths (76.1%) of nonvocational students parents' were

Table 6

Differences in the Plans of Freshmen, Sophomores, and Juniors Regarding Taking Vocational Courses According to Grade in School (n = 15,212)

Plans regarding taking vocational courses	Grade in school		
	9th	10th	11th
Will take more courses	16.0	12.9	9.4
Will take the same number	15.6	26.9	47.6
Will take fewer courses	14.3	18.8	10.8
Undecided	41.1	32.4	23.4
Unaware of changes	13.0	9.0	8.7

Table 7

Whether Students Liked School (n = 19,134)

Student Response	Frequency	Percentage
Likes school	14,421	75.6
Dislikes school	4,413	23.1
Missing data	236	1.2
Total	19,134	100.0

Table 8

Encouragement from Parents, Teachers, and Guidance Counselors for After High School Plans (n=19,134)

	Percentage/frequency		
Encouragement	Parents	Teachers	Counselors
Go to college	69.1 (13,218)	82.6 (15,805)	78.8 (15,077)
Go to vo-tech/trade school	10.5 (2,000)	6.7 (1,273)	8.0 (1,537)
Work full time	10.6 (2,020)	3.9 (745)	4.4 (851)
Go into the military	8.3 (1,597)	3.2 (603)	3.7 (710)
Drop out of school	0.9 (174)	2.7 (523)	2.7 (508)
Missing data	0.7 (125)	1.0 (185)	2.4 (451)

encouraging them to go to college while the parents of 72.2% of low exposure students and 64.8% of high exposure students (students who had taken from 1½ to 4 years of vocational courses) were encouraging them to go to college. No other pertinent findings existed in the data pertaining to parents, teachers, and counselors.

Quality of Counseling Services

Students were asked their opinion of the quality of counseling services at their school (Table 9). Over half (60.0%) of the students felt the services at their school were excellent or good. Only 6.5% perceived that the counseling services in their school were poor.

The only differences noted in an analysis of the data by experience with vocational courses revealed that 11.5% of high exposure students had never visited a counselor, while 18.1% of nonvocational students and 18.% of low exposure students had never visited a counselor.

Discussion of Courses and Career Goals with Selected Individuals

The students were asked if they discussed what courses they were going to take in high school with their parents, teachers, or guidance counselors (Table 10). They were also asked if they had discussed their career goals with their parents, teachers, and guidance counselor.

Over 80% of the students had discussed both their course choices and career goals with their parents. Less than half had discussed their courses choices and career goals with their teachers. Over 50% had discussed course choices with their guidance counselor, but only 28% had discussed career goals with the guidance counselor.

Further analyses revealed the following additional findings:

Table 9

Quality of Counseling Services as Perceived by Students (n = 19,134)

Quality of counseling services	Frequency	Percentage
Excellent	4,510	23.6
Good	6,971	36.4
Fair	3,428	17.9
Poor	1,236	6.5
Never visited counselor	2,925	15.3
Missing data	64	.3
Total	19,134	100.0

Table 10

Students Who Had Discussed Their Course Choices and Career Decisions With Their Parents, Teachers, and Guidance Counselors (n = 19,134)

	Percent/frequency	
Person	Course choices	Career goals
Parents	83.8% (15,937)	85.4% (16,338)
Guidance counselors	51.4% (9,837)	28.2% (5,401)
Teachers	49.4% (9,449)	40.1% (7,668)

a) Only 47.6% of low exposure vocational students had discussed their course choices with their teachers, while 53.8% of nonvocational students and 50.1% of high exposure vocational students had.

b) Almost a third (32.6%) of high exposure students had discussed their career goals with a counselor, while only 25.9% of nonvocational students and 24.9% of low exposure students had.

c) Only 36.9% of low exposure students had discussed their career goals with teachers, while 39.5% of nonvocational students and 44.0% of high exposure students had.

Influence of Selected Classes on Career Decisions

The students were asked if any of 16 classes (subjects) that were identified as being relevant offerings in Louisiana schools had influenced their career decisions. Table 11 shows the results. The data indicate that approximately half of the students perceived that both math and business courses had influenced their career decisions, with lesser numbers indicating that the other courses had had an influence on their career decisions. Caution should be exercised in interpreting these data because the students could not have taken all of the courses listed.

High exposure vocational students were more likely to perceive that English and history influenced their career choices and less likely to perceive that science and foreign language influenced their career choices than were nonvocational students (Table 12). Non-vocational

Table 11

High School Classes That Influenced the Students' Career Decisions

(n = 19,134)

Class	Percent/frequency		
	Yes	No	Missing
Mathematics	50.5 (9,656)	48.7 (9,324)	.8 (154)
Business	49.1 (9,399)	50.2 (9,599)	.7 (136)
English	44.9 (8,585)	54.4 (10,412)	.7 (137)
Science	40.3 (7,720)	58.9 (11,276)	.7 (138)
Health & Physical Education	39.3 (7,515)	60.1 (11,495)	.6 (124)
Civics/Government	34.4 (6,575)	64.9 (12,420)	.7 (139)
Free Enterprise	31.9 (6,106)	67.3 (12,870)	.8 (158)
History	28.2 (5,404)	71.0 (13,579)	.8 (151)
Music	23.8 (4,561)	75.4 (14,431)	.7 (142)
Home Economics	23.5 (4,501)	75.8 (14,504)	.7 (129)
Sociology/Psychology	21.1 (4,032)	78.1 (14,952)	.8 (150)
Art	19.9 (3,811)	79.4 (15,183)	.7 (140)

(table continues)

Table 11 (continued)

High School Classes That Influenced the Student's Career Decisions

(n = 19,134)

Class	Percent/frequency		
	Yes	No	Missing
Industrial Arts	19.6 (3,750)	79.7 (15,246)	.7 (138)
Foreign Language	19.1 (3,650)	80.2 (15,344)	.7 (140)
Marketing and Distributive Education	15.4 (2,951)	83.8 (16,030)	.8 (153)
Agriculture	13.3% (2,541)	86.0% (16,446)	.8% (147)

Table 12
General High School Classes That Influenced the Students' Career Decisions According to Experience with Vocational Courses (n = 19,134)

Class	Percent response by experience with vocational courses		
	Non-vocational	Low exposure	High exposure
Mathematics	49.5	49.5	52.6
English	41.1	45.1	46.8
Science	44.3	42.7	37.5
Health & Physical Education	33.2	40.9	40.7
Civics/Government	32.6	33.6	36.2
Free Enterprise	26.2	28.1	37.9
History	25.3	27.5	30.4
Music	29.9	23.6	22.2
Sociology/Psychology	19.9	20.2	22.6
Art	19.9	19.2	20.9
Foreign Language	24.5	19.6	16.9

students were more likely to perceive that music influenced their career choices and less likely to perceive that health and physical education influenced their career decisions than were vocational students. High exposure vocational students were more likely to perceive that free enterprise influenced their decisions than were low exposure vocational and nonvocational students.

High exposure vocational students were more likely to perceive that vocational courses influenced their career decisions than low exposure vocational students (Table 13).

Factors Important in Selecting a Career

The students were asked to indicate if 20 factors were important to them in selecting a career (Table 14). The three leading factors indicated by the students were interest in this work, salary or wages, and working conditions, with these factors being indicated by 86.9%, 83.5%, and 82.5% of the students, respectively. The factors that had the least effect were family tradition (24.7%) and inheritance of a farm or business (22.6%).

Differences in responses by level of vocational experience occurred for 9 of the 20 factors (Table 15). Vocational students were more likely than nonvocational students to perceive that availability of jobs, work experience, status and reputation of the occupation, costs required to prepare for a career, length of time for training, fringe benefits, indoor or outdoor work, insistence of parents/relatives, and friends/parents/relatives working in this occupation were important factors in selecting a career.

Table 13

Vocational Classes That Influenced Vocational Students' Career Decisions According to Experience with Each Vocational Course

Class	Percent response by experience with vocational courses	
	Low exposure	High exposure
Agriculture (n = 3,380)	43.5	61.5
Business (n = 8,389)	64.0	79.8
Home economics (n = 7,322)	41.2	58.0
Industrial arts (n = 5,001)	44.3	62.2
Marketing and distributive (n = 1,809)	47.6	55.0

Table 14

Factors That Were Important in Selecting a Career (n = 19,134)

Factor	Percent/frequency		
	Yes	No	Missing
Interest in this work	86.9 (16,627)	11.5 (2,193)	1.6 (314)
Salary or wages	83.5 (15,981)	15.2 (2,910)	1.3 (243)
Working conditions	82.5 (15,794)	15.9 (3,047)	1.5 (293)
Personal satisfaction	82.2 (15,736)	16.5 (3,154)	1.3 (244)
Availability of jobs	74.8 (14,315)	24.0 (4,591)	1.2 (228)
Work experience	72.0 (13,782)	26.7 (5,114)	1.2 (238)
Status & reputation of occupation	66.1 (12,649)	32.1 (6,145)	1.8 (340)
Special talents or abilities	64.5 (12,340)	34.2 (6,553)	1.3 (241)
Cost required to prepare for career	60.8 (11,636)	37.6 (7,198)	1.6 (300)
Financial backing is available	58.9 (11,277)	39.8 (7,607)	1.3 (250)
Length of time for training	58.2 (11,145)	40.4 (7,721)	1.4 (268)
Fringe benefits	58.1 (11,115)	40.2 (7,694)	1.7 (325)

(table continues)

Table 14 (continued)

Factors That Were Important in Selecting a Career (n = 19,134)

Factor	Percent/frequency Yes	No	Missing
Indoor or outdoor work	57.6 (11,025)	40.5 (7,742)	1.9 (367)
Contributions to society	52.7 (10,091)	45.9 (8,776)	1.4 (267)
Marriage	42.5 (8,140)	55.7 (10,662)	1.7 (332)
Geographical location	39.7 (7,600)	58.9 (11,278)	1.3 (256)
Insistence of parents/relatives	37.7 (7,216)	60.6 (11,594)	1.7 (324)
Friends, parents or relatives working in this occupation	37.6 (7,187)	60.7 (11,619)	1.7 (328)
Family tradition	24.7 (4,720)	73.1 (13,980)	2.3 (434)
Inheritance of a farm or business	22.6 (4,317)	76.3 (14,598)	1.1 (219)

Table 15

Factors That Were Important in Selecting a Career According to Vocational Education Experience (n = 19,134)

Factor	Percent response by experience with vocational courses		
	Non-vocational	Low exposure	High exposure
Interest in this work	85.7	88.2	89.5
Salary or wages	82.8	84.3	85.5
Working conditions	80.4	82.9	85.9
Personal satisfaction	83.2	82.5	84.0
Availability of jobs	71.4	74.5	78.4
Work experience	68.6	72.4	75.1
Status & reputation of occupation	64.1	66.1	69.5
Special talents or abilities	65.7	65.0	65.5
Cost required to prepare for career	58.3	60.8	64.0
Financial backing is available	57.7	59.1	61.0
Length of time for training	54.8	56.8	62.6
Fringe benefits	56.9	56.8	61.9
Indoor or outdoor work	54.3	57.8	61.2
Contributions to society	53.8	53.1	53.7
Marriage	40.3	43.1	44.6
Geographical location	38.1	38.9	42.3
Insistence of parents/relatives	33.8	38.8	39.7
Friends, parents or relatives working in this occupation	34.2	37.0	40.7
Family tradition	22.6	24.6	26.8
Inheritance of a farm or business	19.7	22.6	24.2

When asked what grade they were in when they decided on a career, more twelfth grade students (24.5%) indicated that they had decided on a career in the twelfth grade than in any other grade (Table 16). Only 13.9% indicated they had selected a career in the tenth grade. This analysis was conducted on the responses of the seniors only so that a valid comparison could be made by grade.

The only noticeable difference by grade occurred in the eleventh grade (Table 17). Fewer nonvocational than vocational students indicated they had decided on a career in the eleventh grade.

Level of Education Needed for a Chosen Career

The students were asked to indicate the level of education they would need to enter their chosen career (Table 18). Over one-third of the students perceived that they would need a college degree and one-fifth indicated they would need to attend vocational or business school for their chosen career. Only 19% perceived that completing high school would be sufficient education to enter their chosen career. When these percentages are totaled, over 75% of the students believed that they needed to complete high school in order to begin their chosen career and less than 4% indicated they would need less than a high school diploma.

More low exposure vocational students and nonvocational students indicated that they would need a college degree to enter their chosen career than was indicated by high exposure vocational students (Table 19). The percentage who indicated that they would need vocational or business school training to enter their chosen career increased with an increase in exposure to vocational training.

Table 16

When the Seniors Indicated They Had Decided on a Career (n = 3,858)

Grade	Frequency	Percent
Ninth or below	600	15.6
Tenth	537	13.9
Eleventh	916	23.7
Twelfth	946	24.5
Have not decided	793	20.6
Missing data	66	1.7
Total	3,858	100.0

Table 17

When the Seniors Indicated They Had Decided on a Career According to Vocational Education Experience (n = 3,858)

	Percent response by experience with vocational courses		
Grade	Non-vocational	Low exposure	High exposure
Ninth or below	18.0	17.7	15.2
Tenth	16.8	14.9	13.7
Eleventh	16.4	22.7	25.2
Twelfth	27.2	24.2	24.9
Have not decided	21.6	20.5	21.0

Table 18

Students' Perception of the Level of Education Needed for Entering Their Chosen Career (n = 19,134)

Education	Frequency	Percent
College degree	7,200	37.6
Vocational or business school or 1 to 3 years of college	3,835	20.0
Completion of high school	3,717	19.4
Uncertain or choice not made	2,929	15.3
Less than high school	751	3.9
Missing data	702	3.7
Total	19,134	100.0

Table 19

Students' Perception of the Level of Education Needed for Entering Their Chosen Career According to Vocational Education Experience (n = 19,134)

Education	Percent response by experience with vocational courses		
	Non-vocational	Low exposure	High exposure
College degree	55.6	54.0	39.6
Vocational or business school or 1 to 3 years of college	13.2	18.3	27.2
Completion of high school	14.8	15.9	18.3
Uncertain or choice not made	9.5	9.9	11.5
Less than high school	7.0	2.0	3.4

Individuals Who Influenced Career Decisions

Students were asked to indicate which individuals on a checklist of 17 people influenced them in their career decisions (Table 20). The 17 individuals were ranked from highest to lowest, according to the students' responses on the instrument.

Four of the top six influential persons were family members. Mothers and fathers ranked first and second, respectively, out of the 17 individuals listed. Parents were followed in order by friends, person in the occupation, grandparents/other relatives, and brother or sister.

High exposure vocational students were more likely to report that friends, persons in the occupation, and guidance counselors influenced their career decisions than were low exposure vocational students and nonvocational students (Table 21). Vocational students were more likely to indicate that grandparents or other relatives were influential than nonvocational students.

Only data from students who had taken vocational courses were used to analyze the influence of their respective vocational teachers. (Table 22). The agriculture and business and office education teachers were marked as influential by more high exposure vocational students than any other teacher. The marketing and distributive education teacher was marked by more low exposure students than any other teacher.

Effect of Vocational Education on Chances of Getting a Job

The students were also asked if they thought they had a better chance of getting a job if they had taken a vocational course. Over half (58.1% or 11,110) thought they would have a better chance, and 34.5% (6593) felt they would not have a better chance of getting a job.

Table 20

Persons Who Influenced the Students' Career Decisions (n = 19,134)

Person	Percent/frequency		
	Yes	No	Missing
Mother	65.1 (12,465)	28.1 (5,373)	6.8 (1,296)
Father	59.2 (11,333)	37.1 (7,091)	3.7 (710)
Friend	51.2 (9,804)	45.8 (8,770)	2.9 (560)
Person in the occupation	47.8 (9,148)	49.1 (9,400)	3.1 (586)
Grandparent or other relative	46.3 (8,859)	50.8 (9,717)	2.9 (558)
Brother or sister	36.5 (6,990)	60.4 (11,560)	3.1 (584)
Other teachers	33.5 (6,406)	63.0 (12,051)	3.5 (677)
Guidance counselor	24.8 (4,747)	71.8 (13,729)	3.4 (658)
Business & office teacher	18.6 (3,565)	78.0 (14,922)	3.4 (647)
Coach	17.3 (3,318)	79.5 (15,210)	3.2 (606)
Military recruiter	14.9 (2,844)	81.5 (15,603)	3.6 (687)
Principal	12.7 (2,424)	84.2 (16,107)	3.2 (603)

(table continues)

Table 20 (continued)

Persons Who Influenced the Students' Career Decisions (n = 19,134)

Person	Percent/frequency		
	Yes	No	Missing
Pastor or other clergy	12.6 (2,403)	84.3 (16,136)	3.1 (595)
Industrial arts teacher	11.3 (2,165)	85.3 (16,312)	3.4 (657)
Vocational home economics teacher	10.7 (2,045)	86.0 (16,456)	3.3 (633)
Vocational agriculture teacher	9.9 (1,897)	86.9 (16,622)	3.2 (615)
Marketing & distributive teacher	8.6 (1,644)	88.0 (16,843)	3.4 (647)

Table 21

Persons Who Influenced the Students' Career Decisions According to Vocational Education Experience (n = 19,134)

Person	Percent response by experience with vocational courses		
	Non-vocational	Low exposure	High exposure
Mother	66.8	70.1	70.8
Father	60.9	62.2	61.2
Friend	49.0	51.7	55.1
Person in the occupation	46.1	47.2	52.3
Grandparent or other relative	43.8	48.1	48.8
Brother or sister	35.6	36.9	39.1
Other teachers	33.7	33.4	36.2
Guidance counselor	20.7	24.3	28.8
Coach	14.9	18.6	18.4
Military recruiter	12.7	14.0	17.6
Principal	10.8	12.5	14.4
Pastor or other clergy	12.1	12.5	13.6

Table 22
Vocational Teachers Who Have Influenced the Students' Career Decisions According to Experience with Each Vocational Course

Person	Percent response by experience with vocational courses	
	Low exposure	High exposure
Agriculture teacher (n = 3,380)	23.9	40.3
Business & office teacher (n = 8,207)	23.9	40.6
Home economics teacher (n = 7,143)	17.0	26.7
Industrial arts teacher (n = 4,839)	24.7	36.3
Marketing & distributive teacher (n = 1,757)	28.1	38.1

CONCLUSIONS AND RECOMMENDATIONS

With the high visibility and scrutiny of education today and the focus on improving the quality thereof, the time has come for addressing some of the realities found in Louisiana schools. A balanced education to meet needs of students and society in general is necessary. Correcting ill-conceived concepts or misconceptions and gathering of information from those served by schools is long overdue. This study has evolved from this conceptual base. Changes should be made based on the evidence presented.

Some previously cited conclusions from research remain valid today. Other conclusions demonstrate new trends in the career decision making practices of students.

The conclusions and recommendations derived from this study are:

1. The attitudes held by most parents, counselors, and students toward vocational education are favorable, and the attitudes held toward vocational education by counselors and parents are more positive than the attitudes held by students. The percentage of students with favorable attitudes increased as their experience with vocational education increased. Over one-third of nonvocational students and their parents have unfavorable attitudes toward vocational education. Perhaps a major public relations program should be implemented. Additionally, vocational teachers cannot afford to diminish their efforts to explain the importance of vocational programs.

2. It does not appear that the recent changes in high school graduation requirements implemented by the Board of Elementary and

Secondary Education will result in a significant change in the number of students who wish to take vocational courses.

3. Perhaps too many parents, teachers, and counselors are encouraging students to enter college rather than pursue vocational or technical training. This is evidenced by the fact that over two-thirds of the students said they were being encouraged to go to college by their parents, and 80% indicated they were being encouraged to go to college by teachers and counselors. Standardized test statistics and job availability for college graduates indicate this percentage is unrealistic. Less than 10% said their parents, teachers, and counselors were encouraging them to go to a vocational, technical, or trade school. This information should be shared with parents, teachers, principals, counselors and the news media in an attempt to alleviate this situation.

4. Persons in the home continue to exert the most influence on career choices. Counselors continue to exert more influence on the career decisions of high school students than other educators. Vocational educators should form linkages among the institutions of home, school, and marketplace.

5. Interest in the work, salary, working conditions, and personal satisfaction are the most important factors considered by students in selecting a career. Current, accurate information must be used by teachers, and career awareness programs must be implemented in our schools.

6. The differences in responses by exposure to vocational education indicate that a uniqueness exists in the career decision making patterns of students. Teachers, counselors, and administrators should examine how students make career decisions and modify the local

career guidance program accordingly. Well-planned programs for early and mid-adolescent youth and their parents regarding the decision making process and the decision should be implemented.

7. Louisiana's high school students are not receiving effective career guidance. Since a person's career is a major focus of one's life, policy makers, administrators, and counselors should take steps to remedy this problem. Almost half of the students selected a career while in either the eleventh or twelfth grade. One-fifth had not selected a career by the twelfth grade. Greater emphasis should be exerted to improve the abilities of students to make career decisions when selection of courses in school can still contribute to successfully meeting career aspirations and goals. This may be accomplished by greater emphasis on all educators' pre and in-service preparation. The assumption that educators inherently possess general knowledge of occupational and career information as well as vocational guidance and counseling skills should be avoided. Further, vocational teachers should adjust their programs to ensure the inclusion of career information and related employment issues as a part of preparation for and advancement in employment.

8. Perceptions of vocational students do not differ significantly from nonvocational students in the area of career decision making. Since one main purpose of vocational education is to prepare students to enter and advance in an occupation, instruction related to career decision making should be a basic component of every vocational program. Additionally, related employment information should be incorporated. Local and state vocational program supervisors should take steps to assist vocational teachers in improving this aspect of career guidance.

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Appendix A: Schools in the Sample

Table A1

Schools in the Sample

Region	School type	Athletic class	School	Parish
Acadiana parishes	Grades 9-12	4A	Sulphur	Calcasieu
			Carencro	Lafayette
		3A	Breaux Bridge	St. Martin
			Marksville	Avoyelles
		2A	West St. John	St. John
			Iowa	Calcasieu
		A/B	Sunshine	Iberville
			Bell City	Calcasieu
			Simmesport	Avoyelles
		C	Henry	Vermillion
			Fifth Ward	Avoyelles
	Split (grades 10-12/grade 9)	4A	South Lafourche Larose-Cut Off Jr.	Lafourche
			Hahnville Hahnville Jr.	St. Charles
North parishes	Grades 9-12	4A	DeRidder	Beauregard
			Pineville	Rapides
		3A	North Caddo	Caddo
			Bolton	Rapides
		2A	Ringgold	Bienville
			Jonesboro-Hodge	Jackson
			Tallulah	Madison
		A/B	LaSalle	LaSalle
			Wisner	Franklin
			Monterey	Concordia
		C	Converse	Sabine
			Bienville	Bienville
			Simsboro	Lincoln

(table continues)

Table A1 (continued)

Schools in the Sample

Region	School type	Athletic class	School	Parish
North parishes	Split (Grades 10-12/Grade 9)	4A	Natchitoches Central	Natchitoches
			Natchitoches 9th Grade	
Southeast	Grades 9-12	4A	Broadmoor	East Baton Rouge
			Baker	East Baton Rouge
		3A	Walker	Livingston
			Lawless	Orleans
		2A	Springfield	Livingston
			Albany	Livingston
		A/B	Phoenix	Plaquemine
			Clinton	East Feliciana
		C	Maurepas	Livingston
	Split (Grades 10-12/Grade 9)	4A	Riverdale	Jefferson
			Joseph Fairchild Jr.	
			Francis Nicholls	Orleans
			C. J. Colton Jr.	

Appendix B: Survey Instrument
CAREER RELATED DECISIONS OF HIGH SCHOOL STUDENTS

DIRECTIONS: Mark your school ID number on Side 2 of the computer answer sheet. Then answer questions 1 thru 88 on Side 1 of the computer answer sheet. Mark only one response for each question number on the answer sheet. THANKS FOR HELPING!!

1. Grade: (a) 9th (b) 10th (c) 11th (d) 12th

2. Sex: (a) Male (b) Female

3. Ethnic Group: (a) Black (non-Hispanic) (b) White (non-Hispanic) (c) American Indian/Alaskan Native (d) Asian/Pacif. Islander (e) Hispanic

4. Age: (a) 14 years of age or less (b) 15 years (c) 16 years (d) 17 years (e) 18 years or over

5. Curriculum: (a) College preparatory (b) General (c) Vocational

6. My high school grade average is: (a) D (b) C (c) B (d) A

7. I live with: (a) My own parents (b) A parent and a step-parent (c) One parent only (d) My grandparents (e) Spouse or other relatives/guardians

8. Number of children in your family including yourself and your married brothers and sisters:
   (a) 1 (b) 2 (c) 3 (d) 4 (e) 5 or more

9. My FATHER'S education consisted of:
   (a) Less than high school
   (b) Completed high school
   (c) Vocational school, business school or 1 to 3 years college
   (d) College degree (B.S., M.S., Ph.D., or professional degree)
   (e) Uncertain

10. My MOTHER'S education consisted of:
   (a) Less than high school
   (b) Completed high school
   (c) Vocational school, business school or 1 to 3 college
   (d) College degree (B.S., M.S., Ph.D., or professional degree)
   (e) Uncertain

MARK THE NUMBER OF YEARS THAT YOU HAVE BEEN ENROLLED IN THESE VOCATIONAL COURSES AT THE END OF THIS SCHOOL YEAR (THRU MAY):

11. Agriculture (a) 0 (b) ½-1 (c) 1½-2 (d) 2½-3 (e) over 3

12. Home Economics (a) 0 (b) ½-1 (c) 1½-2 (d) 2½-3 (e) over 3

13. Marketing & Distributive (a) 0 (b) ½-1 (c) 1½-2 (d) 2½-3 (e) over 3

14. Business & Office (a) 0 (b) ½-1 (c) 1½-2 (d) 2½-3 (e) over 3

15. Industrial Arts (a) 0 (b) ½-1 (c) 1½-2 (d) 2½-3 (e) over 3

16. Other vocational courses (a) 0 (b) ½-1 (c) 1½-2 (d) 2½-3 (e) over 3

17. The attitude of my parents' toward vocational courses such as those listed in questions 11-16:
(a) Unfavorable (b) Favorable

18. My attitude toward vocational courses is:
(a) Unfavorable (b) Favorable

19. My guidance counselor's attitude toward vocational courses is:
(a) Unfavorable (b) Favorable
(c) No guidance counselor at this school

20. Will the recent changes in high school graduation requirements change the number of vocational courses you will take in high school?
(a) I will be taking more vocational courses
(b) I will be taking fewer vocational courses
(c) There will be no change
(d) I'm undecided at this time
(e) I don't know about the changes in graduation requirements

21. In general, I: (a) Like school (b) Dislike school

22. What have your parents encouraged you to do after high school? (Indicate only one.)
(a) Go to college (b) Go to vo-tech or trade school
(c) Work full time (d) Go to the military
(e) Drop out of school

23. What have your teachers encouraged you to do after high school? (Indicate only one.)
(a) Go to college (b) Go to vo-tech or trade school
(c) Work full time (d) Go to the military
(e) Drop out of school

24. What has your guidance counselor encouraged you to do after high school? (Indicate only one.)
(a) Go to college (b) Go to vo-tech or trade school
(c) Work full time (d) Go to the military
(e) Drop out of school

25. Counseling services in my school are:
    (a) Excellent (b) Good (c) Fair (d) Poor
    (e) Never visited guidance counselor

26. I discuss my course choices with a guidance counselor:
    (a) Yes (b) No

27. I discuss my course choices with my teachers: (a) Yes (b) No

28. I discuss my course choices with my parents: (a) Yes (b) No

29. I discuss my career goals with a guidance counselor: (a) Yes (b) No

30. I discuss my career goals with my teachers: (a) Yes (b) No

31. I discuss my career goals with my parents: (a) Yes (b) No

32-47. The high school classes that have influenced my career decisions are: (Mark (a) for yes and (b) for no)

	Yes	No	
32.	(a)	(b)	Agriculture
33.	(a)	(b)	Art
34.	(a)	(b)	Business
35.	(a)	(b)	Civics/Government
36.	(a)	(b)	English
37.	(a)	(b)	Foreign Language
38.	(a)	(b)	Free Enterprise
39.	(a)	(b)	Health & Physical Education
40.	(a)	(b)	History
41.	(a)	(b)	Home Economics
42.	(a)	(b)	Industrial Arts
43.	(a)	(b)	Marketing and Distributive
44.	(a)	(b)	Mathematics
45.	(a)	(b)	Music
46.	(a)	(b)	Science
47.	(a)	(b)	Sociology/Psychology

48-68. For each item listed below, mark (a) for Yes if that factor is important to you in selecting a career or mark (b) for No if that factor is not important to you in selecting a career.

	Yes	No	
48.	(a)	(b)	Interest in this work
49.	(a)	(b)	Working conditions (hours worked, environment, safety)
50.	(a)	(b)	Status and reputation of occupation
51.	(a)	(b)	Availability of jobs
52.	(a)	(b)	Inheritance of a farm or business
53.	(a)	(b)	Work experience
54.	(a)	(b)	Financial backing is available
55.	(a)	(b)	Personal satisfaction
56.	(a)	(b)	Contributions to society
57.	(a)	(b)	Salary or wages
58.	(a)	(b)	Geographical location
59.	(a)	(b)	Special talents or abilities
60.	(a)	(b)	Length of time for training
61.	(a)	(b)	Cost required to prepare for this career
62.	(a)	(b)	Fringe benefits
63.	(a)	(b)	Insistence of parents or relatives
64.	(a)	(b)	Friends, parents or relatives working in this occupation
65.	(a)	(b)	Marriage
66.	(a)	(b)	Indoor or outdoor work
67.	(a)	(b)	Family tradition

****
YOU'RE ALMOST FINISHED! PLEASE ANSWER ALL QUESTIONS BELOW. THANKS!
****

68. When did you decide on which career you want to enter?
    (a) Ninth grade or below
    (b) Tenth grade
    (c) Eleventh grade
    (d) Twelfth grade
    (e) Have not decided

69. The education which I will need for entering my chosen career is: (Indicate only one)
    (a) Less than high school
    (b) Completion of high school
    (c) Vocational school, business school, or 1 to 3 years college
    (d) College degree (B.S., M.S. Ph.D., or professional degree)
    (e) Uncertain or choice not made

70-86. The person(s) who have influenced my career decisions are: (Mark all that apply by marking (a) for Yes or (b) for No)

	Yes	No	
70.	(a)	(b)	Mother
71.	(a)	(b)	Father
72.	(a)	(b)	Brother or Sister
73.	(a)	(b)	Grandparent, aunt, uncle or other relative
74.	(a)	(b)	Friend
75.	(a)	(b)	Person in the occupation
76.	(a)	(b)	Pastor, priest, rabbi or other clergy
77.	(a)	(b)	Coach
78.	(a)	(b)	Principal
79.	(a)	(b)	Vocational Agriculture teacher
80.	(a)	(b)	Vocational Home Economics teacher
81.	(a)	(b)	Marketing and Distributive education teacher
82.	(a)	(b)	Business and Office Occupations teacher
83.	(a)	(b)	Industrial Arts teacher
84.	(a)	(b)	Guidance counselor
85.	(a)	(b)	Other teachers
86.	(a)	(b)	Military recruiter

87. Does your school offer vocational courses? (a) yes (b) no

88. Do students who take vocational courses have a better chance to get a job than those who do not?
    (a) yes (b) no

. . . . . .

. T H A N K S F O R F I L L I N G O U T T H I S F O R M ! ! .

. YOUR HELP IS APPRECIATED!! .

. . . . . .

Appendix C: Letter to Superintendents

March 21, 1986

!STITLE! !SFNAME! !SLNAME!, Superintendent
!PARISH! Parish School Board
!SADDRESS!
!SCITY!, LA !SZIP!

Dear !STITLE! !SLNAME!:

I am writing to request permission to administer the enclosed instrument during April to all students in grades 9-12 at !SCHOOL! High School. This data is being gathered for a project funded by the State Department of Education that is designed to study factors related to the career decision making practices of high school students. !SCHOOL! High School is one of 43 schools that was selected based on geographic area and on school size.

The time needed will be approximately 20-25 minutes. We will provide all materials and will provide !PTITLE! !PLNAME! with a copy of the printout. The data from this school will not be identifiable in the final report because the results will be reported by school size and geographic area.

We will bring the materials to the school packaged according to !PTITLE! !PLNAME!'s instructions and will pick them up after the students have filled them out. We need to administer the questionnaire either in home room or some time before lunch so that we can catch seniors and vocational students.

If a date is listed below, we have already contacted you by phone and received your permission and !PTITLE! !PLNAME!'s permission to gather the data on the date shown. If "TBA" is printed after the date, I have not contacted you yet and would appreciate it if you would call me at 504-388-5748 and let me know if you will give us permission to administer this instrument at !SCHOOL! High School. If you approve this request, I would appreciate it if you would send the enclosed letter and questionnaire to !PTITLE! !PLNAME!.

DATE: !DATE!
TIME: !TIME!

I apologize for making this request on such short notice. We were notified in early January that our proposal had been funded and we started planning at that time. However, we did not receive the contract until March 19.
If you have questions, please call me at the number shown above. Thank You!!

Sincerely,

Joe W. Kotrlik
Project Director

Appendix D: First Letter to Principals

March 21, 1986

!PTITLE! !PFNAME! !PLNAME!, Principal
!SCHOOL! High School
!ADDRESS!
!CITY!, LA !ZIP!

Dear !PTITLE! !PLNAME!:

I am writing to request permission to administer the attached instrument during April to all students in grades 9-12 in your school. This data is for a project funded by the State Department of Education that is designed to study the career decision making practices of high school students. Your school is one of 43 selected based on geographic area and school size.

The time needed for the students to fill out the questionnaire will be 20-25 minutes. We will provide all materials needed will provide you with a copy of the computer printout for your school. Your school's data will not be identifiable in the final report because the results will be reported by school size and by geographic area. No student names will be involved.

We will bring the materials to your school packaged according to your instructions and will stay to pick up the materials after they are filled out. We need to administer the questionnaire either in home room or some time before lunch so that we will catch all of your seniors. We also need to make arrangements to survey any vocational or other students who may attend another school or are involved in other activities during the morning.

If a date is given below, we have already contacted both !STITLE! !SLNAME! and yourself and arranged the time and date shown. In this case, this is a confirmation letter. If "TBA" is printed after the date, we had not contacted you as of March 21. I request that you call me at 504-388-5748 and let me know if you will permit us to administer this instrument in your school.

DATE: !DATE! TIME: !TIME!

I apologize for making this request on such short notice. We were notified in early January that our proposal had been selected and we started planning at that time. However, we did not receive the approved contract until March 19.

I hope that you will give your permission for us to survey the students in your school. If you have questions, please call. Thanks!

Sincerely,

Joe W. Kotrlik
Project Director

Appendix E: Second Letter to Principals

April 14, 1986

!PTITLE! !PFNAME! !PLNAME!, Principal
!SCHOOL! High School
!ADDRESS!
!CITY!, LA !ZIP!

Dear !PTITLE! !PLNAME!:

We are pleased that you will allow us to survey your students on their career decision making patterns. This letter is to confirm the date and time that we have agreed upon. One of our project staff members will be arriving on !DATE! prior to !TIME! with individual packets for each homeroom or other teacher as you directed. If you have not already done so, please send a listing of teachers and the number of students that are in each teachers' room so the packets can be prepared in advance.

Thank you for your cooperation. The printout of the results from your school will be mailed to you in late May or early June. If you have any questions, please call us at the numbers listed below.

Sincerely,

Joe Kotrlik
Project Director
504-388-5748

Betty Harrison, 504-388-2464
Mike Beauvais, 504-388-2109 or 2173
Teddie Wall, 504-388-5748

Appendix F:

Data Collection Instructions to Homeroom Teachers and/or Monitors

SCHOOL ID NUMBER: 0000000

Project: Variables Affecting High School Student Enrollment in Secondary Vocational Courses

Project Director: Dr. Joe W. Kotrlik, School of Voc. Ed. & Techn., LSU

1. DISTRIBUTE A QUESTIONNAIRE, ANSWER SHEET & PENCIL TO EACH STUDENT.

2. INSTRUCT THE STUDENTS TO FILL IN YOUR SCHOOL ID NUMBER (THE NUMBER SHOWN AT THE TOP OF THIS PAGE) IN THE IDENTIFICATION NUMBER SECTION ON SIDE TWO OF THE ANSWER SHEET.

   (AN EXAMPLE OF HOW TO FILL OUT SIDE TWO IS SHOWN BELOW. DO NOT HAVE THEM FILL OUT ANY OTHER INFORMATION ON SIDE TWO.)

3. INSTRUCT THE STUDENTS TO ANSWER THE QUESTIONS FROM THE QUESTIONNAIRE ON SIDE ONE OF THE ANSWER SHEET. THE STUDENTS SHOULD NOT MARK ON THE QUESTIONNAIRE.

4. PLEASE MAKE SURE THAT ALL STUDENTS ANSWER ALL QUESTIONS. IT IS VERY IMPORTANT THAT WE HAVE COMPLETE DATA FROM EVERY STUDENT.

5. WHEN ALL STUDENTS HAVE COMPLETED THE QUESTIONNAIRE:

   PLACE ALL QUESTIONNAIRES, ANSWER SHEETS AND PENCILS BACK INTO THE ENVELOPE. (PLEASE RETURN THE EXTRA MATERIALS THAT WERE NOT USED).

   RETURN THE ENVELOPE TO THE PRINCIPAL'S OFFICE.

6. THANKS FOR HELPING WITH THIS PROJECT!!

---------- SIDE TWO EXAMPLE ----------

(SIDE TWO OF THE INSTRUCTIONS DEPICTED A COPY OF A PROPERLY COMPLETED COMPUTER FORM)

Appendix G:

Data Collection Instructions to Project Staff

INSTRUCTIONS FOR COLLECTING DATA

0. To Grad Students: Make sure that you dress professionally - coat & tie for men, clothes of similar professional "type" for women.

1. Arrive at school at least 30 minutes before time scheduled for data collection.

2. Check in with principal's office first. While visiting with the principal, verify that arrangements have been made to survey all students in the school that are in attendance on the day of the survey. (i.e., make sure that we are not missing vo-tech students who are at the vo-tech school in the morning or seniors who are out on a senior picnic on day of data collection. We will not collect data from students who are absent on day of study.)

3. If you meet with the teachers, do not encourage unintentional but potential bias by disseminating information about the project's objectives; just tell them that:

   a. the project is designed to determine the career decision making attitudes of Louisiana high school students
   b. the students' responses will be analyzed and a copy of the results for their school will be sent to the principal
   c. their school will not be identified in any way in the final report of the study

4. Assist with or handle distribution of the packets to the teachers as instructed by the principal.

5. Make sure that all packets are returned to you.

6. Thank the principal and counselors for cooperating with us on this project.

7. Return all packets (both used and unused) to Dr. Kotrlik.

Appendix H: Third Letter to Principals

May 7, 1986

!PTITLE! !PFNAME! !PLNAME!, Principal
!SCHOOL! High School
!ADDRESS!
!CITY!, LA !ZIP!

Dear !PTITLE! !PLNAME!:

We would like to thank you for allowing us to survey all of the grade 9-12 students in your school for our career decision making practices project. We needed the cooperation of principals in order to secure valid data. You and your faculty were very cooperative and supportive. We really appreciated the enthusiasm exhibited by almost all of the principals, counselors and teachers in the 43 schools we surveyed.

The printout of the results from your school will be mailed to you this summer. As we indicated, your school's data will not be identifiable in the final report because the results will be reported by school size and by geographic area. The final report should be ready in the fall and a summary brochure will be mailed to you that will outline the findings of the study.

If you have any comments or concerns about the way we gathered data in your school, we would appreciate it if you would let me know. We do need to know if there are any limitations on this study because of our data gathering procedures or other factors that we are not aware of.

Once again, thanks for your cooperation. It is appreciated!!

Sincerely,

Dr. Joe Kotrlik
Project Director
504-388-5748

Dr. Betty Harrison, Co-Director
Mr. Mike Beauvais, Co-Director
Ms. Teddie Wall, Graduate Assistant
Mr. Gaylon Parton, Graduate Assistant
Mr. Curtis Borne, Graduate Assistant

Appendix I: Fourth Letter to Principals

May 7, 1986

!PTITLE! !PFNAME! !PLNAME!, Principal
!SCHOOL! High School
!ADDRESS!
!CITY!, LA !ZIP!

Dear !PTITLE! !PLNAME!:

GENERAL NOTES

The computer printouts for your school from the Louisiana High School Students Career Attitudes Project are enclosed. We have printed out the responses of your seniors only because much of the data (such as when a career decision was made) is more valuable and meaningful to you if you know the responses of your seniors. In addition, the responses from other questions (such as the value of counseling services) may have provided misleading indicators, especially for freshmen and sophomores, because it appears that students tend to use counseling services more for career decisions and college information during their junior and senior years.

We know that you would probably prefer to have the data printed out in several different forms, however, we do not have the money available in the project to provide more than one printout per school (we wish we did because the cooperation we received from the schools was fantastic). If you would like to have the data from your school printed out in a different form (looking at different variables other than at seniors only), we will certainly be willing to work with you where possible.

The cost to get a printout usually runs in the $20-35 range per printout depending on how much of the data is analyzed and the form in which it is printed. Multiple "looks" at the data usually cost very little more than the basic amount (if done at the same time) because much of the mathematical processing has already been done (We are not trying to develop an income source - we just don't have the money!).

READING THE PRINTOUT

Reading the printout should be fairly simple. I have labeled all variables and all value categories. In addition, I have enclosed a copy of the questionnaire for you to refer to. In many cases this will be necessary because the wording of many of the questions is highly relevant to how the data should be interpreted.

PLEASE NOTE THAT FOR QUESTION NUMBERS 32 - 47, THE DATA IN YOUR PRINTOUT CAN BE HIGHLY MISLEADING. FOR EXAMPLE, ART CLASS CAN ONLY INFLUENCE A STUDENT'S CAREER DECISION IF HE HAS TAKEN THAT CLASS. SINCE MOST STUDENTS HAVE NOT TAKEN ART, THEN A HIGH PERCENTAGE INDICATING THAT ART DID NOT INFLUENCE THEIR CAREER DECISIONS IS NORMAL AND AND TO BE EXPECTED.

You will notice some responses (usually just a few responses) that just don't make sense! This is normal because students can make stray marks, fill out the questionnaire improperly, or just not understand the question. Also, more missing data should be expected on the questions at the end of the questionnaire if you had some students who did not get through in time.

The overall responses to the questionnaire are very reliable. We calculated Cronbach Alpha reliability coefficients on the 3 larger scales in the instrument to determine the internal consistency of the instrument. The reliability estimates for the scales were .95, .97 and .98 out of a possible 1.00 - all very high. These indicate that the instrument is very reliable and, that if the study were conducted again, the same responses could be expected.

THE FINAL REPORT

As we indicated, your school's data will not be identifiable in the final report because the results will be reported by school size and by geographic area. The final report should be ready in the fall and a summary brochure will be mailed to you that will outline the findings of the study. The data will be examined in several different ways for the statewide report.

THANKS

Once again, thanks for your cooperation. It is appreciated!!

Sincerely,

Dr. Joe Kotrlik
Project Director
504-388-5748

Dr. Betty Harrison, Co-Director
Mr. Mike Beauvais, Co-Director
Ms. Teddie Wall, Graduate Assistant
Mr. Gaylon Parton, Graduate Assistant
Mr. Curtis Borne, Graduate Assistant

cc: !STITLE! !SFNAME! !SLNAME!, Superintendent
!PARISH! Parish School Board
!SADDRESS!
!SCITY!, LA !SZIP!

Appendix J: Demographic Characteristics of Respondents

Table A2

Grade Level (n = 19,134)

Grade	Frequency	Percentage
Ninth	5,605	29.3
Tenth	5,049	26.4
Eleventh	4,558	23.8
Twelfth	3,858	20.2
Missing Cases	64	.3
Total	19,134	100.0

Table A3

Ethnic Group (n = 19,134)

Group	Frequency	Percentage
White (non-Hispanic)	11,834	61.8
Black (non-Hispanic)	6,550	34.2
Asian/Pacific Islander	325	1.7
American Indian/ Alaskan Native	202	1.1
Hispanic	144	.8
Missing Cases	79	.4
Total	19,134	100.0

Table A4

Age (n = 19,134)

Age	Frequency	Percentage
14 years or less	1,982	10.4
15 years	4,825	25.2
16 years	5,110	26.7
17 years	4,605	24.1
18 years or over	2,555	13.4
Missing Cases	57	.3
Total	19,134	100.0

Table A5

Sex (n = 19,134)

Sex	Frequency	Percentage
Male	9,379	49.0
Female	9,699	50.7
Missing Cases	56	0.3
Total	19,143	100.0

Table A6

Curriculum Pursued (n = 19,134)

Curriculum	Frequency	Percentage
College preparatory	8,544	44.7
General	7,814	40.8
Vocational	2,383	12.5
Missing Cases	393	2.1
Total	19,134	100.0

Table A7

High School Grade Point Average (GPA) (n = 19,134)

GPA	Frequency	Percentage
A	1,615	8.4
B	5,765	30.1
C	9,594	50.1
D	2,001	10.5
Missing Cases	159	.8
Total	19,134	100.0

Table A8

Persons With Whom the Students Were Living (n = 19,134)

Live With	Frequency	Percentage
My own parents	11,431	59.7
One parent only	4,105	21.5
A parent & a step parent	2,266	11.8
Spouse or other relatives	646	3.4
My grandparents	623	3.3
Missing Cases	63	.3
Total	19,134	100.0

Table A9

Number of Children in the Students' Families (n = 19,134)

Number	Frequency	Percentage
One	1,211	6.3
Two	4,071	21.3
Three	4,333	22.6
Four	3,509	18.3
Five or more	5,954	31.1
Missing Data	56	.3
Total	19,134	100.0

Table A10

Father's Education (n = 19,134)

Education	Frequency	Percentage
Completed high school	7,107	37.1
Less than high school	3,539	18.5
College degree	3,066	16.0
Vocational/business school or 1 to 3 years college	2,773	14.5
Uncertain	2,554	13.3
Missing Cases	95	.5
Total	19,134	100.0

Table A11

Mother's Education (n = 19,134)

Education	Frequency	Percentage
Completed high school	8,642	45.2
Vocational/business school or 1 to 3 years college	3,157	16.5
Less than high school	3,114	16.3
College degree	2,572	13.4
Uncertain	1,570	8.2
Missing Cases	79	.4
Total	19,134	100.0